SCIENTIFIC BOOKS

THE MARIHUANA PROBLEM

The Marihuana Problem in the City of New York; Sociological, Medical and Pharmacological Studies. By the MAYOR'S COMMITTEE ON MARIHUANA. 220 pp. Lancaster, Pa.: The Jaques Cattell Press. 1944. $2.50.

THIS report includes a thorough study of the ancient hashish vice as it currently exists in New York City. Primarily intended as a local project, the findings have considerable value of a general nature. The publication is a close parallel to the "Indian Hemp Drugs Commission Report" sponsored by the British Government in India about fifty years ago. Together these two studies represent the most significant of Government instigated inquiries into the sociological aspects of this drug problem. In both cases, several official investigators were commissioned to spend a year or more collecting cross-sections of testimony and opinions from individuals who had practiced this drug habit or had observed its effects at close range. The earlier report was relatively massive in comparison (3,281 pages in 7 volumes). The current study gives no direct indication of familiarity with this earlier report and obviously was not materially influenced by the earlier conclusions. This feature gives greater reliability to the findings of both, which were reasonably similar despite the wide differences in locale. In the case of both surveys it was obvious to the sponsors that a satisfactory understanding of the public effects of this practice could be reached only by an associated clinical and pharmacological inquiry. As with the first study, the scientific work included in the New York report represents a substantial contribution to existing clinical and pharmacological knowledge of the subject. Earlier impressions with sporadic measurements are now supported by concerted observations using the methods of the modern clinical laboratory. Electroencephalograms, electrocardiograms, blood chemistry, roentgenograms, expertly devised psychological tests, Rohrschach interpretations, etc., were carried out in a group of seventy-two subjects, forty-eight of whom gave a history of marihuana smoking and all of whom were drawn from the social level in which this drug vice is most likely to appear. The conditions of this study, as carried out at Welfare Hospital, afforded a unique opportunity for standardization and control. The acute episodes showed no significant physiological changes beyond those attributable to the characteristic emotional instability. The old observation of hunger and a desire for sweets was frequently observed but not explained by the metabolic studies; blood sugars commonly, but not consistently, showed a moderate rise. Frequent micturition, another old observation, was not associated with any significant diuresis. Of the psychomotor functions, body and hand steadiness and complex reaction time were most adversely affected. Auditory acuity, musical ability and estimations of time and space were not significantly affected as judged objectively; subjectively, as previously described, these functions were thought to be disturbed. Psychological observations indicated increased feelings of relaxation, disinhibition and self-confidence, which latter was expressed primarily through oral rather than physical activity. The basic personality structure was not changed.

Conclusions, previously recognized but now better supported with these studies, are to the effect that marihuana smoking, at least as ordinarily practiced in this country, does not lead directly to mental or physical deterioration, does not develop addiction or tolerance as is characteristic of opiates, and is not a direct causal factor in sexual or criminal misconduct. As is well known, a number of serious, qualified observers in various parts of the world, including this country, have been somewhat more inclined to favor a conception of true marihuana addiction and to ascribe a causal relation of marihuana to physical and mental deterioration and to criminal behavior. Supporting their views is the fact that they have been able to observe cases where the vice has existed for a much longer time and under conditions where the subjects might be more likely to follow criminal impulses. With due consideration to the possible correctness of some of these observations, this survey in New York City is convincingly sound within the field it attempts to cover. It may be a point of significance that the history of this drug records only three prominent survey projects conducted by groups of physicians and scientists, and in each case the findings have tended to minimize the gravity of the marihuana problem. The reference is to the Indian Hemp Drugs Commission Report in 1893, the report of six military physicians and health officers in Panama in 1933 and this present survey by a group of about thirty individuals, the majority of whom were physicians.

In New York City, according to the report, marihuana smoking is chiefly confined to Negroes and Latin-Americans living in the Harlem area, where this survey estimates there are about five hundred "teapads" and at least five hundred peddlers. The cost is low and there are no potent, well-organized syndicates engaged in the traffic. Among school children over the city at large, the practice has proved to be a minor disciplinary problem in isolated instances. This latter observation probably reflects the situation over the United States as a whole, where school-yard abuse was a serious problem only in the interval between introduction of the vice and the passage of adequate laws restricting the sale of marihuana.

The strictly pharmacological studies reported by S. Loewe record for the first time a full account of the biological control work associated with the chemical identification and synthesis of active compounds as carried out at the University of Illinois and the Bureau of Narcotics Laboratory. This highly successful example of teamwork has furnished new starting points for future inquiries. Some valuable drugs may subsequently be developed from findings of this sort and the problem deserves further study beyond the obviously unpromising attempt to use marihuana compounds in alleviating the withdrawal symptoms of morphine addiction.

R. P. WALTON

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REPORTS

GUGGENHEIM FELLOWSHIP AWARDS

THE award of ninety-six fellowships and $230,000 to the recipients is announced by the John Simon Guggenheim Memorial Foundation. Forty-one of the newly appointed fellows received their awards under the plan for post-service fellowships available to Americans who are engaged directly in the war effort in the Army, Navy and civilian war agencies. Their fellowships will be held for their use after they are discharged from service. The foundation will make another series of appointments to post-service fellowships in June.

DR. SAMUEL HERRICK, assistant professor of astronomy, University of California, Los Angeles, will carry on studies of navigation. He will investigate its present and prospective methods and instruments and the effect of the introduction of rocket propulsion.

DR. PAUL ERDÖS, mathematician, Ann Arbor, Michigan, will carry out research on polynomials and approximation of continuous functions by polynomials.

Biological studies will be carried on by the following fellows:

DR. CARLOS EUGENIO CHARDON, director of the Institute of Tropical Agriculture, Mayagüez, Puerto Rico: The completion of a historical study of the great naturalists who worked in Latin America. From 1931 to 1935 Dr. Chardon was chancellor of the University of Puerto Rico, and he has acted as agricultural adviser to several Latin American countries.

DR. DENIS LLEWELLYN FOX, associate professor of marine biochemistry, Scripps Institution, La Jolla, Calif. The preparation of a monograph on the physical, biological and biochemical features of the structural colors and pigments of animals.

DR. KENNETH WILLARD COOPER, assistant professor of biology, Princeton University: Studies of the mechanism of sex chromosome conjunction during meiosis in male *Drosophila.*

DR. AARON J. SHARP, associate professor of botany, University of Tennessee: Studies of the correlations between the plants of the Southern Appalachians and the temperate floras of the mountains and highlands of Mexico and Central America. This is the second Guggenheim Fellowship awarded to Dr. Sharp, who is now working in Mexico.

DR. DAMON BOYNTON, associate professor of pomology, Cornell University: A study of ion competition as a factor affecting the inorganic nutrition of plants, with particular reference to potassium-magnesium and nitrogen-phosphorus relationships in fruit trees.

DR. THEODORE C. SCHNEIRLA, associate professor of psychology, New York University, and associate curator of animal behavior, American Museum of Natural History: Studies of the relationship between instinct and learning in insect psychology. Dr. Schneirla is now in Tehuantepec, Mexico, where he is studying the behavior of colonies of army ants. This is the second Guggenheim fellowship awarded to Dr. Schneirla.

Awards of fellowships for postwar work in science were made to:

DR. JOHN WILLIAM CALKIN, professor of mathematics, Illinois Institute of Technology, Chicago; now doing war work in Office of Naval Operations, Washington, D. C.: Mathematical studies of the operational theory of boundary value problems and the application of this theory to differential equations.

DR. EDWIN HEWITT, operations analyst, Army Air Forces; formerly instructor in mathematics, Harvard University: Mathematical studies in the field of topology.

DR. LEO LEROY BERANEK, director of research on sound, Harvard University; now engaged upon war research under the Office of Scientific Research and Development: Research in the field of acoustics and design of acoustical materials.

DR. CHANDLER MCCUSKEY BROOKS, associate professor of physiology, the Johns Hopkins School of Medicine; now engaged upon war research under the Office of Scientific Research and Development: A study of the comparative physiology of the nervous and the neuro-endocrine systems.

DR. SEYMOUR STANLEY COHEN, biochemist at the University of Pennsylvania; now engaged upon war research under the Office of Scientific Research and Development: A study of methods of virus and rickettsial cultivation suitable for and preliminary to investigation of biochemical aspects of the host-virus relationship, with special reference to nucleic acid metabolism.

DR. DEAN STANLEY TARBELL, assistant professor of organic chemistry, University of Rochester; now engaged upon war research under the Office of Scientific Research and Development: A study of the synthesis of colchicine and other organic compounds of biological interest.

LIEUTENANT EDWARD NOVITSKI, Army; geneticist, San